



## Definitions

**BUMAX 88** is a premium A4 fastener that offers better corrosion resistance than standard A4 due to higher molybdenum content. The PRE value of Bumax 88 is 27 and of a standard A4 only 23. Bumax 88 offers higher strength and lower amount of inclusions than standard A4 fasteners, that gives superior mechanical properties and fatigue resistance and less variations compared to standard A4. Bumax 88 fasteners are used in many applications that demands very low magnetic permeability, it has lower magnetic permeability and less variation from batch to batch compared to standard A4 fasteners. Bumax 88 is also widely used in cryogenic applications down to -269°C (4 K) and can also be provided with a pre-approval PMA for PED certificate for pressure vessels.

**BUMAX 109** is the strongest A4 fastener on the market. We use the same material as Bumax 88 but achieve higher strength due to a special manufacturing process.

**BUMAX Nitro**, an austenitic stainless steel with high nitrogen content, characterized by very high strength and fatigue resistance, in combination with good corrosion resistance. It is an excellent choice for marine applications and can be supplied in strength class up to 12.9. PRE value 35.

**BUMAX Super Austenite** (SA), Grade EN 1.4547; UNS S31254 (254 SMO) is a 6Mo high-alloy austenitic stainless steel for seawater and other aggressive chloride bearing medias. Excellent resistance to general, crevice, pitting and stress corrosion with a PRE value of 43. Strength class up to 10.9.

**BUMAX Lean Duplex** (LDX), Grade EN 1.4162; UNS S32101 (LDX 2101) offers an economical solution for high strength fasteners (up to 12.9) in low -medium corrosive environments. PRE 26.

**BUMAX Duplex** (DX), Grade EN 1.4462; UNS S32205 (2205) is characterized by excellent strength, ductility and fatigue resistance in combination with good general, pitting, crevice and stress corrosion properties. Strength class up to 12.9 with an excellent ductility giving an elongation of >0,3 x diameter and PRE >34.

**BUMAX Super Duplex** (SDX), Grades EN 1.4410, UNS S32750 & EN 1.4501, UNS S32760; is characterized by excellent mechanical properties and very good corrosion resistance. Excellent resistance to general crevice, pitting and stress corrosion in chloride bearing medias with a PRE of 42. Strength class up to 12.9 with an excellent ductility giving an elongation of >0,3 x diameter.

**BUMAX Hyper Duplex** (HDX), Grade EN 1.4658, UNS S32707; a ground-breaking alloy used in the most demanding applications. Suited for use in severe corrosive environments such as hot chlorinated sea-water and for aggressive acidic chloride containing media in chemical, oil & gas, marine and petrochemical industry.

**BUMAX Ultra**, a unique precipitation hardenable stainless steel that can be delivered in ultra-high strength levels. Offers a unique combination of ultra-high strength combined with excellent ductility and good corrosion resistance in chloride environments, PRE 25. Strongest stainless steel fastener on the market with a strength class up to 16.9.

**BUMAX Heat** (HE), Grade EN 1.4980, UNS S66286 (A286); a high temperature resistant material for applications requiring high strength and good oxidation resistance at temperatures up to 700°C. Can be precipitation hardened.

**BUMAX Heat Plus** (HEP), Grade EN 2.4952, UNS N07080 (Nimonic 80). A nickel base alloy which is a precipitation hardenable high temperature resistant material with excellent oxidation resistance and high tensile and creep properties at temperatures up to 815°C.

**BUMAX Lock**, all-metal lock nut made out of the same steel grade as Bumax 88.

**BUMAX Hard**, is a thread forming and self-tapping screw made out of the same steel grade as Bumax 88 and a hardened thread profile with a surface hardness > HV 1200.

THE WORLD'S STRONGEST STAINLESS BOLT